

ABSTRACT OF THE DISCLOSURE

The present invention uses at least one amplitude bit to assist the phase-sampling technique used in digital receiver architectures. For digital receivers where the Intermediate Frequency (IF) is an integer multiple of the fundamental frequency  $f_o$ , the present invention provides reduced processing complexity and reduced power consumption. The present invention allows the digital receiver to avoid performing coordinate rotation at high speeds, and replaces such a coordinate rotation with a simple phase subtraction. This replacement of the coordinate rotation allows the receiver to use a less complicated design, and to consume less power as a result.

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